

Serial No. 10/036,796

A14
Concluded

devices 1522-1526 extend inwardly past the slots 1512-1516 such that the inner surfaces 1522'-1526' engage the groove 1552. The guide pin 1501 has a tapered top section 1558 to facilitate engagement with the latching devices 1522-1526. The insertion force overcomes the spring bias exerted by spring members 1562-1566 such that the latching devices 1522-1526 move radially outwardly until the latching devices are biased inwardly into the grooves 1552. Advantageously, the force exerted by the springs 1562-1566 is sufficient to maintain force on the conductive spring elements to keep the conductive spring elements engaged with the pads. However, there is no positive lock using this latching device but merely a friction fit sufficient to hold the electrical connector in place against the daughtercard.--

IN THE CLAIMS

Please amend the claims as follows:

- A15-
1. (Amended) An interconnect system, comprising:
 - a first interposer housing including a first plurality of shielding members providing shielding for the thickness of said first interposer;
 - a second interposer housing including a second plurality of shielding members providing shielding for the thickness of said second interposer;
 - at least one cable having a central conductor, a conductive outer jacket, and a dielectric separating said central conductor and said conductive outer jacket, said outer jacket in electrical contact with at least some of said plurality of shielding members in said first interposer housing and said second interposer housing;
 - a cable housing connected to said first interposer and to said interposer for retaining said at least one cable;
 - said at least one cable having exposed portions extending beyond said cable housing into said first interposer and said second interposer, respectively;
 - at least one conductive spring element in contact with a central conductor of said at least one cable.
-

A16 4. (Amended) The interconnect system of claim 1, wherein said shielding members are conductive spring elements.

A17 6. (Amended) The interconnect system of claim 1, wherein said at least one conductive spring element is a conductive spring.

7. (Amended) The interconnect system of claim 1, wherein said at least one conductive spring element is a Fuzz Button™.

A18 10. (Amended) The interconnect system of claim 1, wherein said at least one conductive spring element has approximately the same diameter as said at least one central conductor.

11. (Amended) The interconnect system of claim 1, wherein said at least one conductive spring element is positioned between said exposed portions and a conductive pad on a printed circuit board such that the conductive spring element is compressed and retains approximately the same inductance as said central conductor.

12. (Amended) An electrical connector comprising:
a central cable surrounded by a dielectric layer and an electrically conductive jacket, said central cable having exposed opposite ends;
a first plurality of shielding members in electrical contact with one end of said electrically conductive jacket;
a second plurality of shielding members in electrical contact with an opposite end of said electrically conductive jacket;
a first conductive spring element in contact with one of said exposed opposite ends of said central cable; and

A18
Continued

a second conductive spring element in contact with an opposite exposed end of said central cable.

13. (Amended) The electrical connector of claim 12, wherein said first and second conductive spring elements are fuzz buttons.

A19

17. (Amended) The electrical connector of claim 12, wherein said shielding members are conductive spring elements.

18. (Amended) The electrical connector of claim 12, wherein said shielding members are conductive spring elements.

A20

20. (Amended) The electrical connector of claim 12, wherein said conductive spring element and said central cable have approximately equal diameters.

A21

23. (Amended) A twinax electrical connector, comprising:

- a twinax cable having two electrical conductors spaced from each other and having a dielectric surrounding said two electrical conductors and an electrically conductive layer surrounding said dielectric, said two electrical conductors each having exposed opposite ends;
- a first plurality of shielding members in electrical contact with one end of said electrically conductive jacket;
- a second plurality of shielding members in electrical contact with an opposite end of said electrically conductive jacket;
- a first set of conductive spring elements each in contact with a corresponding one exposed end of said two electrical conductors; and
- a second set of conductive spring elements each in contact with a corresponding second exposed end of said two electrical conductors.

A22

27. (Amended) The twinax electrical connector of claim 23, further comprising:
a first interposer housing for receiving a portion of said first plurality of shielding members;
a second interposer housing for receiving a portion of said second plurality of shielding members;
a first retaining sheet for retaining said first plurality of shielding members and said first conductive spring elements;
a second retaining sheet for retaining said second plurality of shielding members and said second conductive spring elements;
a first movable interposer slide for receiving another portion of said first plurality of shielding members;
a second movable interposer slide for receiving another portion of said second plurality of shielding members.

28. (Amended) The twinax electrical connector of claim 23, wherein said shielding members are conductive spring elements.

A23

30. (Amended) The twinax electrical connector of claim 23, wherein said conductive spring elements are conductive springs.

31. (Amended) The twinax electrical connector of claim 23, wherein said at least one conductive spring element is positioned between said exposed end and a conductive pad on a printed circuit board such that the conductive spring element is compressed and retains approximately the same inductance as said two electrical conductors.

37. (Amended) An electrical connector having a plurality of twinax cables arranged in a vertical and horizontal array, comprising:

a first set of twinax cables arranged in a vertical array and spaced from each other; each twinax cable having a pair of conductors, a dielectric layer and an electrically conductive jacket;

a second set of twinax cables arranged in a vertical array and spaced from each other and horizontally spaced from said first set of twinax cables;

a first plurality of conductive spring elements each positioned against a corresponding conductor;

a second plurality of conductive spring elements each positioned against a corresponding conductor;

a cable housing for retaining said first set and said second set of twinax cables;

a first interposer on one side of said cable housing for receiving one end of said first set and said second set of twinax cables;

a second interposer on another side of said cable housing for receiving an opposite end of said first set and said second set of twinax cables;

a first retaining sheet for retaining signal spring contacts in contact with each pair of conductors on said one end of said first and second set of twinax cables;

a second retaining sheet for retaining signal spring contacts in contact with each pair of conductors on said opposite end of said first and second set of twinax cables;

a first interposer slide biased in a direction away from said first interposer and receiving an opposite end of said signal conductors and having a retracted position and a normal extended position;

a second interposer slide biased in a direction away from said second interposer and receiving an opposite end of said signal conductors and having a retracted position and an extended position;

wherein said conductive spring elements retained by said first retaining sheet and said second retaining sheet are protected by said first interposer slide and said second interposer slide,

A24
Conductivity

respectively, when each is in said retracted position and wherein said first plurality and said second plurality of conductive spring elements extend beyond said first interposer slide and said second interposer slide respectively when each is in said normal extended position.

38. (Amended) The electrical connector of claim 37, wherein the first plurality and the second plurality of conductive spring elements are fuzz buttons.

A25

41. (Amended) The electrical connector of claim 37, wherein said shielding members are conductive spring elements.

A26

46. (Amended) An electrical interconnect system, comprising:

- at least one cable having at least one central conductor and a conductive outer jacket with an insulator therebetween;
- a set of cable housings retaining said at least one cable;
- a first interposer cable housing having a first plurality of through holes corresponding to said at least one central conductor and a second plurality of holes partially overlapped in a radial direction with a respective one of said conductive outer jackets;
- a second interposer cable housing having a third plurality of through holes corresponding to said at least one central conductor and a fourth plurality of holes partially overlapped in a radial direction with a respective one of said conductive outer jackets;
- a first plurality of electrically conductive spring elements for insertion into said first plurality of through holes in said first interposer;
- a second plurality of electrically conductive spring elements for insertion into said second plurality of holes in said first interposer;
- a first interposer slide including a first interposer cable housing having a first plurality of through holes corresponding to said at least one central conductor and a second plurality of holes partially overlapped in a radial direction with a respective one of said conductive outer jackets;

3 Sub
A 88
Concluded

a first retainer positioned between said first interposer cable housing and said first interposer slide for retaining said first plurality of electrically conductive spring elements and said second plurality of electrically conductive spring elements;

a second interposer cable housing having a third plurality of through holes corresponding to said at least one central conductor and a fourth plurality of holes partially overlapped in a radial direction with a respective one of said conductive outer jackets;

a third plurality of electrically conductive spring elements for insertion into said third plurality of through holes in said second interposer;

a fourth plurality of electrically conductive spring elements for insertion into said fourth plurality of holes in said second interposer;

a second interposer slide including a third interposer cable housing having a third plurality of through holes corresponding to said at least one central conductor and a fourth plurality of holes partially overlapped in a radial direction with a respective one of said conductive outer jackets;

a second retainer positioned between said second interposer cable housing and said second interposer slide for retaining said third plurality of electrically conductive spring elements and said fourth plurality of electrically conductive spring elements.

47. (Amended) The electrical interconnect of claim 46, wherein first plurality and the second plurality of conductive spring elements are fuzz buttons.

50. (Amended) A twinax electrical connector including a latching device, comprising:

827

a twinax cable having two electrical conductors spaced from each other and having a dielectric surrounding said two electrical conductors and an electrically conductive layer surrounding said dielectric, said two electrical conductors each having exposed opposite ends;

a first plurality of shielding members in electrical contact with one end of said electrically conductive jacket;

A27
Cont

a second plurality of shielding members in electrical contact with an opposite end of said electrically conductive jacket;

a first set of conductive spring elements each in contact with a corresponding one exposed end of said two electrical conductors;

a second set of conductive spring elements each in contact with a corresponding second exposed end of said two electrical conductors; and

a latching mechanism including a latching device in the housing for latching onto the guide pin.

51. The twinax electrical connector of claim 50, wherein the first plurality and the second plurality of conductive spring elements are fuzz buttons.

52. An electrical connector having a plurality of twinax cables arranged in a vertical and horizontal array and having a latching mechanism, comprising:

a first set of twinax cables arranged in a vertical array and spaced from each other; each twinax cable having a pair of conductors, a dielectric layer and an electrically conductive jacket;

a second set of twinax cables arranged in a vertical array and spaced from each other and horizontally spaced from said first set of twinax cables;

a first plurality of conductive spring elements each positioned against a corresponding conductor;

a second plurality of conductive spring elements each positioned against a corresponding conductor;

a cable housing for retaining said first set and said second set of twinax cables;

a first interposer on one side of said cable housing for receiving one end of said first set and said second set of twinax cables;

a second interposer on another side of said cable housing for receiving an opposite end of said first set and said second set of twinax cables;

Serial No. 10/036,796

Asy
Concluded

a first retaining sheet for retaining signal spring contacts in contact with each pair of conductors on said one end of said first and second set of twinax cables;

a second retaining sheet for retaining signal spring contacts in contact with each pair of conductors on said opposite end of said first and second set of twinax cables;

a first interposer slide biased in a direction away from said first interposer and receiving an opposite end of said signal conductors and having a retracted position and a normal extended position;

a second interposer slide biased in a direction away from said second interposer and receiving an opposite end of said signal conductors and having a retracted position and an extended position;

wherein said conductive spring elements retained by said first retaining sheet and said second retaining sheet are protected by said first interposer slide and said second interposer slide, respectively when each is in said retracted position and wherein said first plurality and said second plurality of conductive spring elements extend beyond said first interposer slide and said second interposer slide respectively when each is in said normal extended position;

a latching mechanism including a latching device in the housing for latching onto the guide pin.
